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 <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	09/892,591 AUG 16 2002 TECH CENTER 1600/29
		Filing Date	June 27, 2001
		First Named Inventor	Tillman U. Gerngross
		Group Art Unit	1645
		Examiner Name	
		Attorney Docket Number	GFI 100
Sheet	1	of	2

## U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

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Sheet 5 of 2

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		Application Number	09/892,591	AUG 16 2002
		Filing Date	June 27, 2001	TECH CENTER 160
		First Named Inventor	Tillman U. Gerngross	
		Group Art Unit	1645	
		Examiner Name		
Sheet 1 of 2	2	Attorney Docket Number	GFI 100	

## OTHER ART -- NON PATENT LITERATURE DOCUMENTS

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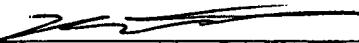
Sheet 1 of 9

Application Number	09/892,591
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First Named Inventor	Tillman U. Gerngross
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		Number	Kind Code <sup>2</sup> (if known)		
CQ	4,414,329			Wegner	11-08-1983
	4,617,274			Wegner	10-14-1986
	4,683,293			Craig	07-28-1987
	4,775,622			Hitzeman et al.	10-04-1988
	4,808,537			Stroman et al.	02-28-1989
	4,812,405			Lair et al.	03-14-1989
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	4,837,148			Clegg	06-06-1989
	4,855,231			Stroman et al.	08-08-1989
	4,857,467			Sreekrishna et al.	08-15-1989
	4,879,231			Stroman et al.	11-07-1989
	4,882,279			Clegg	11-21-1989
	4,885,242			Clegg	12-05-1989
	4,925,796			Bergh et al.	05-15-1990
	4,929,555			Clegg et al.	05-29-1990

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)	
CQ	EP	0 905 232	A1	Kirin Beer Kabushiki Kaisha	03-31-1999
	EP	1 054 062	A1	Kyowa Hakko Kogyo Co., Ltd.	11-22-2000
	WO	96/21038		Alko Group Ltd	07-11-1996
	WO	98/05768		The Austin Research Institute	02-12-1998
	WO	99/31224		National Research Council of Canada	06-24-1999
	WO	99/54342		Umana et al.	10-28-1999

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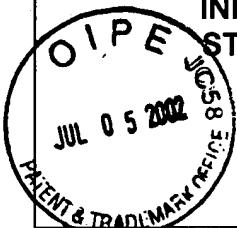
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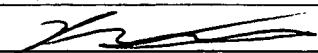


Sheet 2 of 9

Application Number	09/892,591
Filing Date	June 27, 2001
First Named Inventor	Tillman U. Gerngross
Group Art Unit	1645
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U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	US Patent Document		Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
CA	4,935,349			McKnight et al.	06-19-1990	
	5,002,876			Sreekrishna et al.	03-26-1991	
	5,004,688			Craig et al.	04-02-1991	
	5,032,516			Cregg	07-16-1991	
	5,032,519			Paulson et al.	07-16-1991	
	5,047,335			Paulson et al.	09-10-1991	
	5,122,465			Cregg et al.	06-16-1992	
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	5,166,329			Cregg	11-24-1992	
	5,324,663			Lowe	06-28-1994	
	5,595,900			Lowe	01-27-1997	
	5,602,003			Pierse et al.	02-11-1997	
	5,707,828			Sreekrishna et al.	01-13-1998	
	5,766,910			Fukuda et al.	06-16-1998	
	5,834,251			Maras et al.	11-10-1998	

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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
CA	WO 01/14522			A1	Kirin Beer Kabushiki Kaisha	03-01-2001	
CA	WO 01/25406				University of Victoria Innovation & Development Corp	04-12-2001	
CA	WO 02/00856				Flanders Interuniversity Institute for Biotechnology	01-01-2002	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number 09/892,591 Filing Date June 27, 2001 First Named Inventor Tillman U. Gerngross Group Art Unit 1645 Examiner Name Attorney Docket Number GFI 100	
 Sheet 3 of 9		ER 160012900 2002 ED	

U.S. PATENT DOCUMENTS						Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
Examiner Initials*	Cite No. <sup>1</sup>	US Patent Document		Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY		
		Number	Kind Code (if known)				
CD	5,849,904			Gerardy-Schahn et al.	12-15-1998		
	5,854,018			Hitzemane et al.	12-29-1998		
	5,861,293			Kojiri et al.	01-19-1999		
	5,910,570			Elhammer et al.	06-08-1999		
	5,945,314			Prieto et al.	08-31-1999		
	5,945,322			Gotschlich	08-31-1999		
	5,955,347			Lowe	09-21-1999		
	5,955,422			Lin	09-21-1999		
	5,962,294			Paulson et al.	10-05-1999		
	6,017,743			Tsuji et al.	01-25-2000		
	6,096,512			Elhammer et al.	08-01-2000		
↓	6,204,431			Prieto et al.	03-20-2001		

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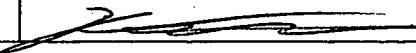
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Sheet 4 of 9

Application Number	09/892,591
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Group Art Unit	1645
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**OTHER ART – NON PATENT LITERATURE DOCUMENTS**

Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
CQ		ALTMANN, et al., "Processing of asparagine-linked oligosaccharides in insect cells: evidence for alpha-mannosidase II," <i>Glycoconj. J.</i> 12(2):150-155 (1995).	
		ALTMANN, et al., "Insect cells as hosts for the expression of recombinant glycoproteins," <i>Glycoconj. J.</i> 16(2):109-123 (1999).	
		ANDERSEN, et al., "The effect of cell-culture conditions on the oligosaccharide structures of secreted glycoproteins," <i>Cur. Opin.Biotechnol</i> 5(5) 546-549 (1994).	
		AOKI, et al., "Expression and activity of chimeric molecules between human UDP-galactose transporter and CMP-sialic acid transporter," <i>J Biochem (Tokyo)</i> 126(5): 940-950 (1999).	
	✓	BARDOR, et al., "Analysis of the N-glycosylation of recombinant glycoproteins produced in transgenic plants," <i>Trends in Plant Science</i> 4(9): 376-380 (1999).	
		BEAUMET, et al., "High-level expression of mouse Mdr3 P-glycoprotein in yeast Pichia pastoris and characterization of ATPase activity," <i>Methods Enzymol</i> 292: 397-413 (1998).	
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	✓	BERNINSONE, et al., "Regulation of yeast Golgi glycosylation. Guanosine diphosphatase functions as a homodimer in the membrane," <i>J. Biol. Chem.</i> 270(24): 14564-14567 (1995).	
	✓	BERNINSONE, et al., "The Golgi guanosine diphosphatase is required for transport of GDP-mannose into the lumen of <i>Saccharomyces cerevisiae</i> Golgi vesicles," <i>J. Biol. Chem.</i> 269(1):207-211 (1994).	

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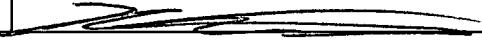
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<b>01 INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>JUL 05 2001</i> <i>(use as many sheets as necessary)</i> <b>PATENT &amp; TRADEMARK OFFICE</b>		Application Number	09/892,591
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CQ	/	BONNEAUD, et al., "A family of low and high copy replicative, integrative and single-stranded <i>S. cerevisiae</i> / <i>E. coli</i> shuttle vectors," <i>Yeast</i> 7(6): 609-615 (1991).	
	/	BRETTHAUER, et al., "Glycosylation of <i>Pichia pastoris</i> -derived proteins," <i>Biotechnol Appl Biochem</i> 30(Pt 3): 193-200 (1999).	
	/	CEREGHINO, et al., "Heterologous protein expression in the methylotrophic yeast <i>Pichia pastoris</i> ," <i>FEMS Microbiol Rev</i> 24(1): 45-66 (2000).	
	/	CHANDRASEKARAN, et al., "Purification and properties of alpha-D-mannose:beta-1,2-N-acetylglucosaminyl-transferases and alpha-D-mannosidases from human adenocarcinoma," <i>Cancer Res</i> 44(9):4059-68 (1984).	
	/	CHIBA, et al., "Production of human compatible high mannose-type (Man5GlcNAc2) sugar chains in <i>Saccharomyces cerevisiae</i> ," <i>J. Biol. Chem</i> 273(41): 26298-26304 (1998).	
	/	COLE, et al., "Modelling the growth, survival and death of microorganisms in foods: the UK food micromodel approach," <i>J Cell. Biochem</i> 23(3-4) 265-265 (1994).	
	/	DENTE, "Human alpha-1-acid glycoprotein genes," <i>Prog. Clin. Biol. Res</i> 300:85-98 (1989).	
	/	EADES, et al., "Characterization of the class I alpha-mannosidase gene family in the filamentous fungus <i>Aspergillus nidulans</i> ," <i>Gene</i> 255(1):25-34 (2000).	
	/	ECKHARDT, et al., "Molecular cloning of the hamster CMP-sialic acid transporter," <i>Eur. J. Biochem.</i> 248(1): 187-192 (1997).	
	/	GRAHAM, et al., "Compartmental organization of Golgi-specific protein modification and vacuolar protein sorting events defined in a yeast sec18 (NSF) mutant," <i>J. Cell. Biol.</i> 114(2):207-218 (1991).	

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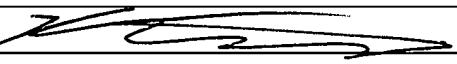
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CQ	/	GUILLEN, et al., "Mammalian Golgi apparatus UDP-N-acetylglucosamine transporter: molecular cloning by phenotypic correction of a yeast mutant," <i>Proc. Natl. Acad. Sci. USA</i> 95(14): 7888-7892 (1998).
	/	HARKKI, et al., "A Novel Fungal Expression System - Secretion of Active Calf Chymosin from the Filamentous Fungus Trichoderma-Reesei." <i>Bio-Tech</i> 7:596-603 (1989).
	/	ICHISHIMA, et al., "Molecular and enzymic properties of recombinant 1, 2-alpha-mannosidase from Aspergillus saitoi overexpressed in Aspergillus oryzae cells," <i>Biochem. J.</i> 339(Pt 3):589-597 (1999).
	/	ISHIDA, et al., "Molecular cloning and functional expression of the human Golgi UDP-N-acetylglucosamine transporter," <i>J. Biochem. (Tokyo)</i> 126(1): 68-77 (1999).
	/	JARVIS, et al., "Engineering N-glycosylation pathways in the baculovirus-insect cell system," <i>Curr Opin Biotechnol</i> 9(5):528-33 (1998).
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	/	KREZDORN, et al., "HUMAN BETA-1,4 GALACTOSYLTRANSFERASE AND ALPHA-2,6 SIALYLTRANSFERASE EXPRESSED IN <i>SACCHAROMYCES-CEREVIAE</i> ARE RETAINED AS ACTIVE ENZYMES IN THE ENDOPLASMIC-RETICULUM," <i>J. BIOCHEM.</i> 220(3): 809-817 (1994).
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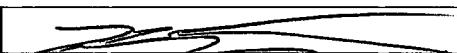
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>		Application Number	09/892,591
		Filing Date	June 27, 2001
		First Named Inventor	Tillman U. Gerngross
		Group Art Unit	1645
		Examiner Name	
Sheet 1 of 9	of	9	Attorney Docket Number

OTHER ART – NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
CQ		MARAS, et al., "In vitro conversion of the carbohydrate moiety of fungal glycoproteins to mammalian-type oligosaccharides - Evidence for N-acetylglucosaminyltransferase-I-accepting glycans from <i>Trichoderma reesei</i> ," <i>European Journal of Biochemistry</i> 249(3): 701-707 (1997).	
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✓		RAJU et al., "Analysis of glycoconjugates," <i>Anal Biochem.</i> 283(2): 123-124 (2000).	

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8 of 9

Application Number	09/892,591
Filing Date	June 27, 2001
First Named Inventor	Tillman U. Gerngross
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Attorney Docket Number	GFI 100

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CQ		REN et al., "Purification and properties of a Golgi-derived (alpha 1,2)-mannosidase-I from baculovirus-infected lepidopteran insect cells (IPLB-SF21AE) with preferential activity toward mannose6-N-acetylglucosamine2," <i>Biochem.</i> 34(8): 2489-2495 (1995).	
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		SEGAWA, et al. "Schizosaccharomyces pombe UDP-galactose transporter: identification of its functional form through cDNA cloning and expression in mammalian cells," <i>FEBS Lett</i> 451(3): 295-298 (1999).	
		SIKORSKI, et al., "A system of shuttle vectors and yeast host strains designed for efficient manipulation of DNA in <i>Saccharomyces cerevisiae</i> ," <i>Genetics</i> ; 122(1): 19-27 (1989).	
		SOMMERS, et al., "Transport of Sugar Nucleotides into Rat-Liver Golgi." <i>J. Cell Biol.</i> 91(2): A406-A406 (1981).	
✓		SOMMERS, et al., "Transport of sugar nucleotides into rat liver Golgi. A new Golgi marker activity," <i>J. Biol. Chem.</i> 257(18): 811-817 (1982).	

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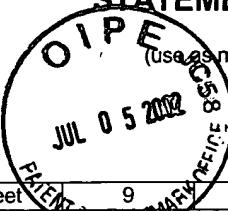
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CQ	✓	STAUB, et al., "High-yield production of a human therapeutic protein in tobacco chloroplasts," <i>Nature Biotechnology</i> 18(3): 333-338 (2000).
	✓	SVETINA, et al., "Expression of catalytic subunit of bovine enterokinase in the filamentous fungus Aspergillus niger," <i>J Biotechnol</i> 76(2-3): 245-251 (2000).
	✓	TAKEUCHI, "Trial for molecular breeding of yeast for the production of glycoprotein therapeutics," <i>Trends in Glycoscience and Glycotechnology</i> 9:S29-S35 (1997).
	✓	WARE, et al., "Expression of Human Platelet Glycoprotein Ib-Alpha in Transgenic Mice," <i>Thrombosis and Haemostasis</i> 69(6): 1194-1194 (1993).
	✓	WEIKERT, et al., "Engineering Chinese hamster ovary cells to maximize sialic acid content of recombinant glycoproteins," <i>Nat Biotech</i> 17(11): 1116-1121 (1999).
	✓	WERNER, et al., "Appropriate mammalian expression systems for biopharmaceuticals," <i>Arzneimittelforschung</i> 48(8):870-880 (1998).
	✓	YANG, et al., "Effects of ammonia on CHO cell growth, erythropoietin production, and glycosylation," <i>Biotechnol Bioeng</i> 68(4): 370-380 (2000).
	✓	YOKO-O, et al., "Schizosaccharomyces pombe och1(+) encodes alpha-1,6-mannosyltransferase that is involved in outer chain elongation of N-linked oligosaccharides," <i>FEBS Lett.</i> 489(1):75-80 (2001).
	✓	YOSHIDA, et al., "1,2-alpha-D-mannosidase from <i>Penicillium citrinum</i> : molecular and enzymic properties of two isoenzymes," <i>Biochem. J.</i> 290(Pt 2):349-354 (1993).
↓	✓	YOSHIDA, et al., "Expression and characterization of rat UDP-N-acetylglucosamine: alpha-3-D-mannoside beta-1,2-N-acetylglucosaminyltransferase I in <i>Saccharomyces cerevisiae</i> ," <i>Glycobiology</i> 9(1): 53-58 (1999).

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